Context and Implications Document for: Using evidence-informed logic models to bridge methods in educational evaluation

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Author's Introduction

Designs that combine differing forms of data are increasingly used to structure educational evaluation studies, for a variety of reasons. In particular, using combinations of methods can help improve understanding and enable better interpretation of findings from evaluations with a variety of purposes including impact, pilot and scale-up evaluations, all of which are considered in this paper. The use of logic models as visual representations that lay out the steps from inputs to outcomes of programmes has become widespread as a tool for designing educational evaluations, especially as they have been promoted by policy makers and funders including the Education Endowment Foundation (EEF) in England. Yet the use of logic models in educational evaluation, in particular, has not previously been subjected to adequate critical consideration, in the way that such models have been in the wider evaluation field, to support their use to both provide the most robust representation of the intervention being evaluated and to interpret evaluation findings. The paper reflects on practical and theoretical implications of critical literature on logic models focusing particularly on implementation logic, causal mechanisms, context and complexity. The approaches used in two EEF evaluations by the authors, which seek to address these problems, are drawn on to present a new evidence-based logic model frame and draw out a set of key issues to address in future evaluations that use logic models.

Implications for Practice

The main practical implications are for the practice of evaluators who may be using logic models as framing tools for evaluations. Attention is drawn to ways in which evaluators can address issues relating to representation of the implementation logic, causal mechanisms, context and complexity (the four key issues identified in the paper) as follows.

Firstly, logic models can helpfully lay out the implementation logic behind implementation pathways from development to outcomes; however attention must be paid to alternative and interacting implementation pathways.

Secondly, a logic model approach requires attention to be paid to causal mechanisms. Often causal mechanisms are ignored, and this can mean that it is not possible to distinguish between 'implementation failure' (the intervention is poorly implemented) and 'theory failure' (the theoretical basis for the intervention is faulty). Further, causal mechanisms should be supported by research literature and alternative and complementary causal mechanisms should be considered. In addition, in educational interventions there are often multiple independent inter-related causal processes involved in the same programme (for example a mechanism related to professional development leading to changes in practice, and a separate

mechanism from practice changes to pupil outcomes) each of which should be considered individually and in relation to other causal processes.

Thirdly, the role of the context within which evaluations play out is crucial, and under-researched. Context is often missing entirely from such models. Logic models can oversimplify context in a number of ways, by failing to capture that context can be dynamic, agentic, relational, historically located and immanent. Questions to ask in evaluation design and possible ways of more adequately visually representing context are provided in the paper.

Finally logic models can struggle to deal with complexity as they necessarily try to lay out clear causal processes involved. This can mean that deeper, underlying social processes will be ignored, and important sets of circumstances and relationships which are simply not amenable to a logic model approach can be simply treated as context. The potential for seeking emergent outcomes and looking out feedback loops and other issues associated with complexity require models to be revised. This is particularly problematic in less well defined complex interventions, such as those focussing on system or organisational change. For such interventions, alternative approaches such as Theory of Change may be more appropriate.

An exemplar evidence-based logic model frame, with associated guidance and a set of questions to be addressed as the evaluation is designed, are provided in the paper to help evaluators in practice to address these issues.